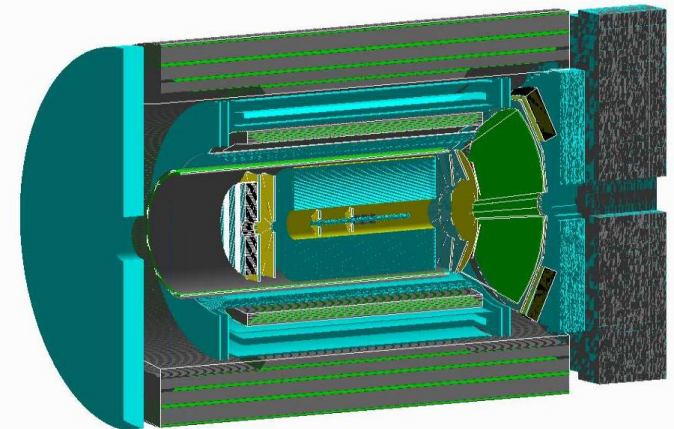


FUN4ALL

COMICS - GAMES

& Software



Installation

Singularity Installation Instructions: <https://github.com/eic/Singularity>



Once installed:

Local copy of cvmfs:

use *updatebuild.sh* to refresh occasionally with latest updates

Start with *singularity shell -B cvmfs:/cvmfs cvmfs/sphenix.sdcc.bnl.gov/singularity/rhic_sl7_ext.simg*

With cvmfs:

Start with *singularity shell -B /cvmfs:/cvmfs /cvmfs/sphenix.sdcc.bnl.gov/singularity/rhic_sl7_ext.simg*

In case you don't notice the difference: it is cvmfs: versus /cvmfs:

Set up environment in container:

source /cvmfs/eic.opensciencegrid.org/x8664_sl7/opt/fun4all/core/bin/eic_setup.sh -n

Validation Tool

QA suite exists, very active development by sPHENIX (modules based on sPHENIX needs):

https://github.com/eic/fun4all_coresoftware/tree/master/offline/QA/modules

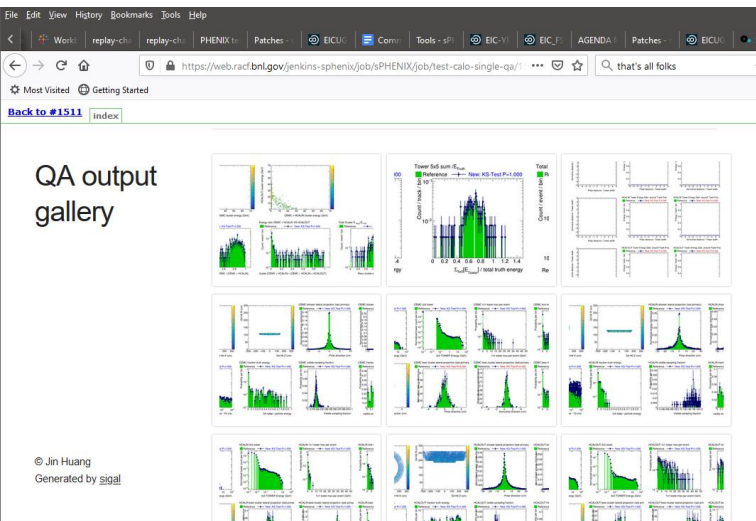
QA added to standard reconstruction macros, runs interactively or as part of CI

simple adding of modules in reconstruction macro:

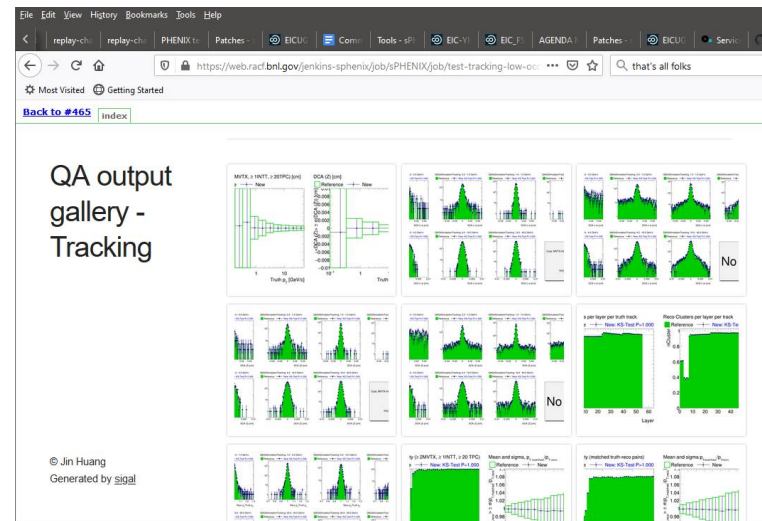
```
se->registerSubsystem(new QAG4SimulationCalorimeter("CEMC"));
```

```
se->registerSubsystem(new QAG4SimulationCalorimeter("HCALIN"));
```

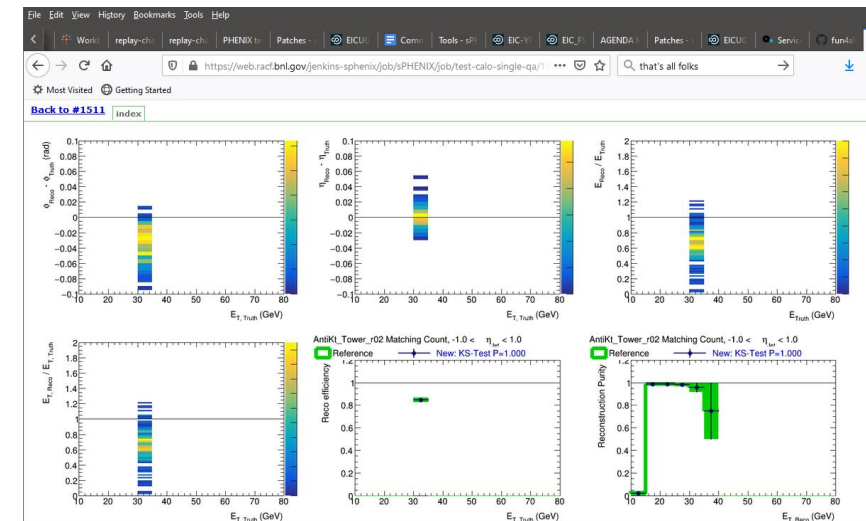
```
se->registerSubsystem(new QAG4SimulationCalorimeter("HCALOUT"));
```



Calorimeter



Tracking



Jets

Next steps

Existing tools:

Tracking is generic and can easily be adapted on the macro level to other configurations (All Silicon Tracker, LANL proposal)

Projections for arbitrary cylinders + vertical planes

Calorimeter reconstruction and clustering

Jet reconstruction using tracks and calorimeter towers

Generic detectors (cylinders, blocks, cones)

Evaluators

To do:

EIC relevant QA needs to be determined and implemented

CI for EIC or part of the daily build

Vetting of G4 versions and physics lists

Based on sPHENIX experience:

Implement the EIC flag ship analysis('s). This will focus the effort, and this will ultimately decide which detector concept wins